P500Q 10GbE iSCSI-SAS 3U16 High Availability Systems

Qsan's storage systems are designed for high availability, non-stop services, applications demanding high throughput, and flexible storage planning with cost effectiveness for small and medium businesses.

Highlights

1. Two 10GbE iSCSI ports per controller.
2. Up to 220K IOPS & 1300MB/Sec. throughput.
3. Fully redundant & hot pluggable designs: RAID controllers, power supplies, fan modules, battery backup modules, & JBOD expansion.
4. Hardware 10Gb iSCSI offloaded engine.
5. Green storage designs: auto disk spin down, advanced cooling mechanism, & 80 PLUS energy-efficient power supplies.
6. Advanced data protection: RAID 6, 60, QSnap writeable snapshot, Windows VSS support
7. Flexible volume management for multiple applications & environments: virtualization (VMWare, Hyper-V, Citrix), cloud storage, SQL, Exchange, surveillance, file backup, email, boot from SAN, & etc.
8. High connection availability: load balancing & failover.
9. Extendable capacity up to 144TB.

High Availability

P500Q 10GbE iSCSI system is specially designed for high availability applications. The P500Q is well equipped with fully redundant components for all major functions, including redundant RAID controllers, power supplies, fan modules, battery backup modules, and SAS JBOD expansion ports. Being hot pluggable, all of them provide non-stop services. In addition, the firmware is high available as well, including RAID 6, 60 support, QSnap writable snapshot, Windows VSS support, and volume configuration restoration; all of these are provided to reduce the chance of rebooting or shutdown. Distinct from others, P500Q is able to upgrade firmware without system down time. Both firmware image and volume handling are well protected by the redundant RAID controllers; when one RAID controller is down or has lost the connection, the other RAID controller takes over its tasks immediately. The volumes and the services are transferred seamlessly simultaneously.

Outstanding Performance

P500Q IOPS is 220,000 at maximum, much higher than other storage systems within the same segment in the current market; besides, its throughput is 1300MB/Sec. at maximum.

Applications

The optimized IOPS and throughput are capable of providing run-time critical online services, such as Cloud storage, SQL, Exchange, and high-end surveillance storages. Furthermore, with the 10GbE iSCSI interface, P500Q is ideal for virtualization environments - VMWare, Hyper-V, and Citrix. Users can install up to 32 OSes in the 10GbE iSCSI system through the Boot-from-SAN feature. With this feature, the multiple OSes/Servers can be managed easily and well protected by Qsan's advanced data protection features, and there will be no system downtime caused by single point of failure.

Green

All P500Q systems are equipped with Qsan's default green features for power saving. In most cases, the hard drives consume most power. With the auto disk spin down feature and proper configuration, the power consumption of hard drives can be reduced to a minimum, and users will not even notice this feature. P500Q monitors the environment temperature for cooling mechanism and the fan modules respond accordingly. The power supply modules are all 80 PLUS power efficient for better power converting rate. In virtue of the reduction of hard drive power consumption, the advanced cooling mechanism, and the energy-efficient power supplies, the unnecessary power cost is decreased greatly.

Ordering Information

Controller Configuration

P500Q-D316	Dual controllers
P500Q-S316	Single & upgradable controller
P500Q-C316	Single controller*

Optional Components

Hot pluggable BBM	Battery backup module for cache
QSATA board	SATAII drives support

* The specific functions of dual controller are not available in P500Q-C316.

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	P500Q-D316	P500Q-S316	P500Q-C316
Hardware Components			
RAID Controller	Dual controllers	Single & upgradable controller	Single controller
No. of Host Channels Per Controller	2 x 10GbE iSCSI	2 x 10GbE iSCSI	2 x 10GbE iSCSI
Expansion Enclosure	J300Q series	J300Q series	J300Q series
Cache Memory Per Controller	2GB, up to 4GB	2GB, up to 4GB	2GB, up to 4GB
No. of Hard Drives (SAS & SATA II)	16	16	16
Max. No. of Hard Drives (SAS & SATA II)	72	72	72
Power Supply	2 x 500W	2 x 500W	2 x 500W
Fan	2	2	2
Dimensions	3U 19" Rackmount 446.0mm x 499.5mm x 130.0mm (W x D x H)		
Feature Highlights			
Green	Auto disk spin down Advanced cooling mechanism 80 PLUS energy-efficient power supplies		
iSCSI	Hardware iSCSI off-load engine iSCSI jumbo frame Header/Data digest CHAP authentication Up to 32 multiple nodes support Up to 128 sessions per controller		
RAID & Volume	RAID level 0,1,0+1,3,5,6,10,30,50, 60, JBOD, N-way mirror Up to 1024 logical volumes Up to 32 hard drives per volume group One logic volume can be shared by as many as 16 hosts Global and dedicated hot spare Write-through or write-back cache policy Online volume expansion Instant RAID volume availability Auto volume rebuilding On-line volume migration without system down time		
High Availability	Dual-active RAID controller Cache mirroring through high bandwidth channels Flexible RAID group ownership management Management port seamless take-over Online firmware upgrade, no system down time Multi-path & load-balancing support (Microsoft MPIO, MC/S, Trunking, LACP)		Multi-path & load-balancing support (Microsoft MPIO, MC/S, Trunking, LACP)
Advanced Data Protection	QSnap writable snapshot Microsoft Windows Volume Shadow Copy Services (VSS) Configurable N-way mirror Online disk roaming Instant volume configuration restoration Hot pluggable battery backup module (BBM)		
Management	LCM; Serial console; SSH telnet; HTTP Web UI; Secured Web (HTTPS); iSNS; S.E.S.		
Notification	Email; SNMP trap; Browser pop-up windows; Syslog; Windows Messenger		
OS Support	Windows; Linux; Solaris; Mac		
Virtualization	VMWare; Hyper-V; Citrix		
Warranty	3-year warranty for system 1-year warranty for battery backup module		
Requirements			
AC Input	100-240V ~ 7A-4A 500W with PFC (Auto Switching)		
DC Output	3.3V-25A; 5V-32A; 12V-40A		
Operating Temperature	0 to 40°C		
Relative Humidity	5% to 95% non-condensing		

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